



HK 376 Biomechanics – Course Syllabus

Department of Human Kinetics
Saint Francis Xavier University



Instructor: Dr. Sasho Mackenzie e: smackenz@stfx.ca web: www.sashomackenzie.com
Office: Office hours by appointment: Tues. 8-9 am; Thurs. 8-9 am; Fri. 8-10 am
Course time: A Block [Mon –8:15 Tuesday – 10:15 Thurs – 9:15]: ASCHL207
Text: McGinnis, Peter M., Biomechanics of Sport and Exercise 3rd Ed.

Course Objectives:

- a. To encourage students in biomechanics to develop an analytical problem solving approach that utilizes a systematic chain of reasoning based on the premises established by Newton.
- b. To provide the mechanical information necessary to enable the student to objectively criticize the sport technique involved in any athletic event which the student may one day have to teach or coach. Specifically, the student will be required to:
 - i) understand and apply Newton's laws of motion as they apply to human movement.
 - ii) understand and apply the 'free body diagram' concept to the analyses of human motion.

Evaluation:

| | |
|---------------------------------|--------------|
| Assignments | 40 % |
| In Class Questions | 20 % |
| <u>Open Book Moodle Quizzes</u> | <u>40 %</u> |
| Total | 100 % |

Labs:

Eight, 3-hour labs will be held throughout the term in Rm 7 in the Exercise Science Center. Please refer to the schedule provided on the class webpage for specific dates and lab content.

Assignments:

Six assignments will be administered. **Neither the Lab Instructor nor the Professor will provide help with assignment solutions prior to their evaluation.** We will only clarify what is being asked.

In Class Questions:

Questions will be posed in class using the mobile polling software [Top Hat Pro](#). There is a \$30 charge cost for the semester. Attempted questions will automatically earn a student 40% of the question's value, while a correct answer earns 100%. For example, if a student answers every question, but answers them all incorrectly, they will earn 8/20 for this grade category.

Open Book Moodle Quizzes:

Open book quizzes are equally weighted and will be posted on Moodle throughout the semester. For *most* quizzes, you will have multiple attempts. Your highest grade on each quiz will be used. Please check due dates and number of attempts on Moodle on a weekly basis. Quizzes should be completed within 3 days of their opening. Students have an additional 7 days to complete each quiz in case of extenuating circumstances. The additional 7 days is reflected in the quiz due date shown on Moodle.